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ABSTRACT

Designed to evaluate the usefulness of the BIOSIS PREVIEWS database when searching the psychiatric literature, this study compared the effectiveness of this online database with the effectiveness of two other computerized databases, MEDLINE and PsycINFO (Psychological Abstracts), which psychiatric researchers and clinicians usually rely on when engaged in bibliographical retrieval of psychiatric/medical literature. Two strategies were used. First, 12 items were randomly selected from the titles of recently published articles (1983-April 1988) in the psychiatric literature. Each term was searched in BIOSIS, MEDLINE, and PsycINFO to determine the potential usefulness of BIOSIS in psychiatry when compared to the other two databases. In the second search strategy, six of the original terms were individually combined with other terms commonly found in the literature. When the total citation output on these combination terms was compared among the three databases, it was found that BIOSIS PREVIEWS was the most productive in the number of citations retrieved from the search terms selected for this study. These search results indicate the efficacy of the BIOSIS PREVIEWS database for psychiatric research and its potential usefulness as an adjunct to comprehensive multi-database search strategies, particularly when comprehensive literature retrieval is desired. Two tables display tabulations of the numbers of citations retrieved from each of the three databases. (7 references) (CGD)

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The Utility of the BIOSIS PREVIEWS Database in Psychiatric Research

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BIOSIS PREVIEWS Database

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Precis

The authors accessed the BIOSIS PREVIEWS database utilizing 18 search terms from the psychiatric literature in order to compare the effectiveness of this database with MEDLINE and PsycINFO. Although the BIOSIS PREVIEWS database is not normally accessed by most psychiatric researchers it was discovered that with the search terms selected for this study it was the most productive database in terms of number of citations retrieved. Search results indicate the efficacy of the BIOSIS PREVIEWS database for psychiatric research and its potential usefulness as an adjunct to comprehensive multi-database search strategies.

The Utility of the BIOSIS PREVIEWS Database in Psychiatric Research

Psychiatric researchers and clinicians usually rely on the computerized online database MEDLINE when engaged in bibliographic retrieval of the psychiatric/medical literature (1-2). This major database contains over 5.2 million records from 1966 to the present and accesses over 3,200 source journals from the medical and health-related sciences. Although use of MEDLINE usually proves to be quite efficient and productive, the online information industry now offers numerous online databases related to the medical and behavioral sciences. For example, PsycINFO (the online version of **Psychological Abstracts**) provides worldwide coverage of the psychological literature from 1967 to the present from over 1,400 journals, reports, monographs, and dissertations. This important database contains over 600,000 records and has an annual incremental growth of approximately 40,000 records. Although PsycINFO is considerably smaller than MEDLINE, it is often the database of choice for literature retrieval in psychology and the behavioral sciences (3).

BIOSIS PREVIEWS, a non-traditional database for psychiatric research has shown impressive retrieval results, particularly in the fields of neurology, psychology, behavioral medicine, and pharmacology (4). This large database contains over 5.6 million records from over 9,000 source journals and monographic titles from the biological sciences; however it is frequently

overlooked by psychiatric researchers. This is unfortunate since the source journals and monographs in BIOSIS are not only from the field of biology, but also from medicine, neurology, psychiatry, and psychology. Since it has an annual incremental growth of 500,000 records it exceeds both MEDLINE and PsycINFO in total size and annual growth. A database of this size and scope offers tremendous potential for the psychiatric researcher or clinician. It is also readily accessible through many of the popular database vendors such as DIALOG, BRS, or SDC, which are available in health settings and research libraries.

In order to evaluate the usefulness of BIOSIS in psychiatry a comparison of retrieval results was conducted utilizing search terms from the psychiatric nomenclature that one would normally expect to be productive in MEDLINE and/or PsycINFO.

METHOD

In the first strategy twelve terms were randomly selected from titles of recently published articles in the psychiatric literature. The reader will find the terms quite prevalent in contemporary psychiatry. Each term was then searched in BIOSIS, MEDLINE, and PsycINFO with search results (number of citations) limited to the 1983-April 1988 time frame so as to determine the presence of relatively recent literature in each file, and to make equitable comparisons over the same time span. Search results utilizing these twelve terms should provide insight into the productivity and potential usefulness of BIOSIS in psychiatry

when compared to MEDLINE and PsycINFO.

To further evaluate the efficacy of BIOSIS in psychiatric literature retrieval, six of the original terms were individually combined with other terms commonly found in the literature. Total citation output on these combination terms were then compared among the three databases. Search results were once again limited to the 1983-April 1988 time frame.

RESULTS

Table 1 presents the first search strategy in which twelve individual terms were searched in all three databases.

INSERT TABLE 1 ABOUT HERE

BIOSIS outperformed both MEDLINE and PsycINFO in 10 of the searches. These results are noteworthy since BIOSIS is not normally considered a "psychiatric" database. Although PsycINFO produced more citations with "Endogenous Depression" BIOSIS still outperformed MEDLINE with this search term. In a similar manner, MEDLINE was the most productive database with "Obsessive Compulsive Disorder" but BIOSIS outperformed PsycINFO. Cumulatively BIOSIS was most productive with 83% of the searches and came in second in the two remaining searches.

In the second search strategy involving a combination of psychiatric terms, results were even more dramatic.

INSERT TABLE 2 ABOUT HERE

As indicated in Table 2 BIOSIS outperformed both MEDLINE and PsycINFO in all six combination terms. It is noteworthy that BIOSIS produced more citations with the search combining "Endogenous Depression" with "Beck Depression Inventory" since PsycINFO had produced 140 more citations than BIOSIS with the term "Endogenous Depression" in the first search strategy outlined in Table 1. Moreover, PsycINFO showed inferior output with all six search term combinations. It is also interesting that the total number of citations produced by BIOSIS (n=40) exceeded the total number of citations produced by both MEDLINE (n=25) and PsycINFO (n=4) with the combination terms used in this search strategy.

DISCUSSION

The present study illustrates the superior productivity of the BIOSIS PREVIEWS database when compared to MEDLINE and PsycINFO using 18 selected search terms from the psychiatric literature. These results clearly demonstrate the efficacy of multi-database searching in the behavioral and medical sciences; that is, multiple database files produce comprehensive retrieval output (5-6). However, search results can vary since each database has its own indexing practices that may influence citation output. It should also be emphasized that search

results can be considerably different when the entire time span of a database is searched. For this reason conclusions about the superiority of one database over another should be made cautiously.

The results of the online exercises in the present study should encourage the clinician or researcher to consider accessing the BIOSIS PREVIEWS database as an adjunct to multi-database search strategies, particularly when comprehensive literature retrieval is desired (7). The implications of these findings should be quite apparent to clinicians involved in psychiatric research.

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TABLE 1. Comparison of Citation Retrieval in BIOSIS, MEDLINE, and PsycINFO (1983-April 1988)

	Online Databases		
	BIOSIS	MEDLINE	PsycINFO
Search Terms			
Panic Disorder	259	239	158
Turner(s) Syndrome	254	101	17
Hamilton Rating Scale(s)	72	9	8
Schizoaffective Disorder	61	18	15
Bipolar Affective Disorder	56	46	35
Wechsler Memory Scale	52	17	31
Wisconsin Card Sorting Test	18	6	10
Benton Visual Retention Test	9	2	4
Frontal Lobe Syndrome	5	3	2
Catecholamine Hypothesis	3	0	0
Endogenous Depression	190	151	330
Obsessive Compulsive Disorder	114	437	76
TOTAL	1,093	1,029	686

TABLE 2. Search Term Combinations and Number of Citations (1983-Apr. 1988)

	Online Databases		
	BIOSIS	MEDLINE	PsycINFO
Search Terms			
Panic Disorder(s) & Tranquilizer(s)	22	20	4
Hamilton Rating Scale(s) & Anxiety	11	0	0
Endogenous Depression & Beck Depression Inven.	2	0	0
Turner(s) Syndrome & Depression	2	1	0
Wisconsin Card Sorting Test & Memory	2	0	0
Bipolar Affective Disorder & Phenelzine	1	0	0
TOTAL	40	21	4